

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An isolated polynucleotide from a strain of *Chlamydia* selected from the group consisting of:
  - (a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO:1; ~~and~~
  - (b) a polynucleotide that is at least 95% homologous to the nucleotide sequence of SEQ ID NO:1; and
  - (c) a polynucleotide which hybridizes under stringent hybridizing conditions of 6xSSC containing 50% formamide at 42°C with a polynucleotide ~~that has a complementary sequence to~~ comprising the nucleotide sequence of SEQ ID NO:1,wherein administration of said isolated polynucleotide, ~~when administered~~ in an immunogenically-effective amount to a mammal, induces an immune response in said mammal against infection by said strain of *Chlamydia*.
2. (Previously Amended) The polynucleotide of claim 1, linked to a second nucleotide sequence encoding a fusion polypeptide.
3. (Previously Amended) The polynucleotide of claim 2 wherein the fusion polypeptide is a heterologous signal peptide.
4. (Previously Amended) The nucleotide of claim 2 wherein the polynucleotide encodes a polypeptide comprising the amino acid sequence of SEQ ID NO: 2.

Claims 5-9 (Previously Canceled)

10. (Originally Presented) An expression cassette, comprising the polynucleotide of claim 1 operably linked to a promoter.

11. (Originally Presented) An expression vector, comprising the expression cassette of claim 10.
12. (Originally Presented) A host cell, comprising the expression cassette of claim 10.
13. (Previously Amended) The host cell of claim 12, wherein said host cell is a prokaryotic cell.
14. (Previously Amended) The host cell of claim 12, wherein said host cell is a eukaryotic cell.

Claim 15 (Previously Canceled)

16. (Previously Amended) A vaccine vector, comprising the expression cassette of claim 10.

Claim 17 (Previously Canceled)

18. (Previously Amended) The vaccine vector of claim 16, wherein said vector is in a pharmaceutically acceptable excipient.
19. (Previously Amended) A pharmaceutical composition, comprising an immunologically effective amount of the vaccine vector of claim 16.

Claims 20-24 (Previously Canceled)

25. (Previously Amended) A polynucleotide probe reagent that detects the presence of *Chlamydia* in a biological material, comprising a polynucleotide that hybridizes with the polynucleotide of claim 1 under stringent hybridizing conditions of 6xSSC containing 50% formamide at 42°C.

26. (Originally Presented) The polynucleotide probe reagent of claim 25, wherein said reagent is a DNA primer.

Claims 27-37 (Previously Canceled)

38. (Originally Presented) The host cell of claim 14, wherein said eukaryotic cell is a mammalian cell.
39. (Originally Presented) The host cell of claim 38, wherein said mammalian cell is a human cell.

Claims 40-41 (Previously Canceled)

42. (Previously Added) The vaccine vector of claim 16, wherein said vector is a viral live vaccine vector or a bacterial live vaccine vector.
43. (Previously Added) The vaccine vector of claim 42, wherein said viral live vaccine vector is selected from the group consisting of: adenoviruses, alphavirus, and poxviruses.
44. (Previously Added) The vaccine vector of claim 42, wherein said bacterial live vaccine vector is selected from the group consisting of: *Shigella*, *Salmonella*, *Vibrio cholerae*, *Lactobacillus*, Bacille bilié de Calmette-Guérin, and *Streptococcus*.